

REMARKS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-26 are currently pending. Claims 2, 4, 11, 14, 15, 22, 24, and 26 have been amended by the present amendment. The changes to the claims are supported by the originally filed specification and do not add new matter.

In the outstanding Office Action, Claims 1-4, 6, 11, 13, 17, 22, 24, and 26 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application Publication No. 2003/0045318 to Subrahmanya (hereinafter “the ‘318 application”);¹ Claim 26 was rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application Publication No. 2004/0157636 to Park et al. (hereinafter “the ‘635 application”); Claims 5, 10, 12, 14-16, 21, 23, and 25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the ‘318 application in view of the ‘635 application; and Claims 7-9 and 18-20 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form.

Claim 1 is directed to a method of deciding a transmit power level carried out by a wireless terminal in a mobile communications system comprising: (1) deciding a multiplex number of uplink control signals; and (2) deciding a transmit power level according to the decided multiplex number of uplink control signals.

Regarding the rejection of Claim 1 as anticipated by the ‘318 application, the ‘318 application is directed to a method for determining a power control decision by combining power control commands transmitted from a plurality of base stations. As shown in Figures 2 and 3, the ‘318 application discloses an inner loop between a base station and a mobile terminal in which a soft-decision symbol combining unit 222 receives power control signals

¹ However, in a discussion with the Examiner on August 24, 2006, the Examiner indicated that Claim 24 should have been rejected under 35 U.S.C. § 103 and that Claim 26 should have been rejected as anticipated by only the ‘636 application.

from *multiple* base stations and determines a transmit power adjustment by combining the power control symbols. Further, the '318 application discloses an outer loop in which a setpoint used by the base station can be adjusted by a switch using the set point adjustment unit 234. However, Applicants respectfully submit that the '318 application fails to disclose the step of deciding a multiplex number of uplink control signals, as recited in Claim 1. The '318 application is silent regarding deciding a multiplex number of uplink control signals. Rather, the '318 application discloses a wireless terminal that combines power control commands from multiple base stations. However, the '318 application does not disclose that a number of uplink control signals is determined. Accordingly, Applicants respectfully traverse the rejection of Claim 1 as anticipated by the '318 application.

Independent Claims 3, 6, and 17 recite limitations analogous to the limitations recited in Claim 1. Accordingly, for reasons analogous to the reasons stated above for the patentability of Claim 1, Applicants respectfully traverse the rejection of Claims 3, 6, and 17 (and all similar rejected dependent claims) as anticipated by the '318 application.

Amended Claim 2 is directed to a method of deciding a transmit power level carried out by a wireless terminal in a mobile communications system comprising: (1) estimating a quality of an uplink control signal based on at least one of acknowledgement and negative acknowledgement information signals transmitted by the wireless terminal; and (2) deciding a transmit power level according to the estimated quality of the uplink control signal. The changes to Claim 2 are supported by the originally filed specification and do not add new matter.²

Applicants respectfully submit that the rejection of Claim 2 is rendered moot by the present amendment to that claim.

² See, e.g., Figures 7A, 7B, and 8 and the discussion related thereto in the specification.

As discussed above, the '318 application is directed to a method and apparatus for combining power control commands received in a wireless communication system. However, Applicants respectfully submit that the '318 application fails to disclose estimating a quality of an uplink control signal based on at least one of acknowledgement and negative acknowledgement information signals transmitted by the wireless terminal, as recited in amended Claim 2. In this regard, Applicants note that the Office Action cited paragraphs [0006] and [0029] in the '318 application as disclosing the elements recited in Claim 2. Paragraph [0006] of the '318 application discloses a target signal-to-noise ratio (SNR) used as a power control setpoint and discloses that an outer power control loop is typically employed to adjust the setpoint so that the desired level of performance is maintained. However, Applicants respectfully submit that the '318 application is silent regarding the use of at least one of acknowledgement and negative acknowledgement information signals transmitted by a wireless terminal to estimate a quality of an uplink control signal. Paragraph [0006] is a general paragraph in the Background section of the '318 application which discloses the general goal of maintaining a given level of performance in the reverse communication link. Accordingly, Applicants respectfully submit that amended Claim 2 patentably defines over the '318 application.

Independent Claims 4, 11, and 22 recite limitations analogous to the limitations recited in Claim 2. Moreover, Claims 4, 11, and 22 have been amended in a manner analogous to the amendment to Claim 2. Accordingly, for reasons analogous to the reasons stated above for the patentability of Claim 2, Applicants respectfully submit that the rejections of Claims 4, 11, and 22 (and all similarly rejected dependent claims) are rendered moot by the present amendment to those claims.

Amended Claim 26 is directed to a mobile communication system comprising a plurality of wireless terminals and a base station, wherein (1) the plurality of wireless

terminals respectively are configured to estimate a quality of uplink control signal based on at least one of acknowledgement and negative acknowledgement information signals transmitted by the wireless terminals and to inform degradation of the quality of the uplink control signals to the base station when one of the respective wireless terminals estimates the degradation of the quality of the uplink control signals; and (2) the base station is configured to decide to increase a transmit power level of the uplink control signals from each of the wireless terminals when the base station receives from one of the wireless terminals an information that the quality of the uplink control signals for informing an incorrect receipt of the downlink data signal is degraded, and to decide to decrease the transmit power level of the uplink control signals from each of the wireless terminals when the base station receives from one of the wireless terminals an information that the quality of the uplink control signals for informing a correct receipt of the downlink data signals is degraded, and to send an indication value of the transmit power level to all of the plurality of wireless terminals.

Applicants respectfully submit that the rejection of Claim 26 as anticipated by the ‘635 application is rendered moot by the present amendment to Claim 26.

The ‘635 application is directed to a power control apparatus for a mobile communication system in which a receiver at a mobile station multiplexes the frame reception result indicator bits for at least two traffic channels received from a base station, inserts the multiplexed frame reception result indicator bits in a pilot signal bit by bit, and transmits the reverse frame. As shown in Figure 1C, the mobile terminal receives a first traffic channel frame and a second traffic channel frame and sends the reception result of the first and second traffic channel frame. As shown in Table 1, the ‘635 application discloses that a 16-bit code word is sent from the mobile terminal to indicate whether the reception result of the first channel was good or bad and/or whether the reception result of the second traffic channel was good or bad. However, Applicants respectfully submit that the ‘635

application fails to disclose that a plurality of wireless terminals are configured to estimate a quality of uplink control signal based on at least one of acknowledgement and negative acknowledgement information signals transmitted by the wireless terminals, as recited in Claim 26. Further, Applicants respectfully submit that the '635 application fails to disclose a base station configured to send an indication value of a transmit power to all of the plurality of wireless terminals after the base station is determined to increase or decrease a transmit power level of the uplink control signal, as recited in Claim 26. Accordingly, Applicants respectfully submit that amended Claim 26 patentably defines over the '635 application.

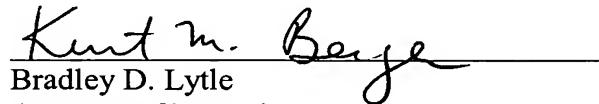
Regarding the rejection of independent Claim 5 under 35 U.S.C. § 103, Applicants respectfully submit that the rejection of Claim 5 is rendered moot by the present amendment to Claim 5. Claim 5 has been amended to recite the step of estimating, by the plurality of wireless terminals, a quality of an uplink control signal, respectively, based on at least one of acknowledgement and negative acknowledgement information signals transmitted by the wireless terminal. As discussed above, the '318 and '635 applications, taken either singly or in proper combination, fail to disclose this limitation. Accordingly, Applicants respectfully submit the rejection of Claim 5 is rendered moot by the present amendment to that claim.

Thus, it is respectfully submitted that independent Claims 1-6, 11, 17, 20, 26 (and all associated dependent claims), patentably define over any proper combination of the '318 and '635 applications.

Consequently, in view of the present amendment and in light of the above discussion, the outstanding grounds for rejection are believed to have been overcome. The application as amended herewith is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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